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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/749,898

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Paul J. Buras

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EXAMINER

BRUNSMAN, DAVID M

ART UNIT

PAPER NUMBER

1793

MAIL DATE

DELIVERY MODE

09/23/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/749,898	Applicant(s) BURAS ET AL.	
	Examiner David M. Brunzman	Art Unit 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 June 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,7,9,30 and 33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1,3,7,9,30,33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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Applicant's response filed 27 June 2008 has been carefully considered. Claims 1, 3, 7, 9, 30 and 33 are pending. The rejection under 112(1) is withdrawn in view of applicant's amendment. The rejection of claims 10-12, 15-17, 22, 31, 32, 34 and 36-38 under section 102 is withdrawn in view of applicant's amendment.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3, 7, 9, 30 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6767939.

The instant claims are construed in examination consistent with their broadest reasonable interpretation. For example, the preamble recitation of "a method for reducing hydrogen sulfide emissions" is a statement of intent and claims thereto are anticipated by any teaching of the same process steps whether or not the prior art intended to reduce H₂S emission solely or in part or even recognized the possibility thereof. A process part of the public domain may not be captured as an exclusive right simply by the recognition of an unrealized advantage thereto. The prior art cited is representative of a large body of prior art disclosing the addition of materials such as zinc oxide to asphalt compositions.

The reference teaches a method of making an asphalt composition useful to be combined with aggregate for paving roads comprising combining asphalt, a styrene butadiene polymer modifier, MBT, zinc oxide and elemental sulfur at a temperature sufficient to allow stirring (indistinguishable from the lowest temperature for effective pumping). While the zinc oxide is intended as a crosslinking promoter it is present in amounts which anticipate the ranges of the instant claims. See Table 5 (disclosing ingredients in amounts anticipating the instant claims) and the patented claims. The reduction in hydrogen sulfide emissions and iron pyrite formation, as the zinc oxide is present in amounts taught by the instant invention, would be expected to necessarily result therefrom. The examples therein further disclose a method of compatibility testing wherein the combined asphalt heated cast into cylindrical molds removed and cut into multiple pieces.

The difference between the instant claims and the examples of the patent is the use of MBT as a crosslinking agent in the reference while the instant claims require one of dithiocarbamates, alkyl polysulfides and ester polysulfides. Paragraph [0031] of the instant specification admits that MBT and dithiocarbamates are known as conventional crosslinking agent for asphalt compositions. It would have been obvious to one of ordinary skill in the art to at least partially substitute a dithiocarbamate for the MBT of the reference because they are known to function equivalently.

Claims 1, 3, 4, 7, 9, 30 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6104916, as applied above.

Column 4, lines 6-43 of the patent teach a method of forming an asphalt for use with aggregate in paving roads comprising mixing asphalt (at about 150 C, indistinguishable from 280 F, since "lower temperature would require considerable mixing energy) with a styrene butadiene polymer modifier and 0.1-2% of a vulcanization composition comprising, for example, 1 part tetramethylthiuram disulfide, 5 parts zinc oxide, 3 parts stearic acid and 1 part antioxidant. Calculated as, 0.03-1% ZnO and 0.05-1.4% vulcanization composition less ZnO. The reduction in hydrogen sulfide emissions and iron pyrite formation, as the zinc oxide is present in amounts taught by the instant invention, would be expected to necessarily result therefrom.

Applicant's calculation of a maximum amount of ZnO as 0.86% is disputed. There is no teaching in the prior art reference that the maximum amount of ZnO (5 parts) only applies when the maximum amounts of other materials are used (for a total of 23 parts). While the patent allows for greater proportions of ZnO, the examiner most reasonably relies upon the preferred embodiment described at Column 2, lines 41-44 teaches 5 parts ZnO of a total 10 parts indicating 1% ZnO when the polymer modifier is added at 10%. Furthermore, the lower limit of the term "greater than 0.86%" is not materially different from a content of 0.86%. As set forth above, a claim including a statement of intended use is anticipated by any teaching of the same process steps whether or not the prior art intended to.

The difference between these claims and the prior patent is the use of the thiurams crosslinker in the patent while the instant claims require one of dithiocarbamates, alkyl polysulfides and ester polysulfides. Paragraph [0031] of the

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instant specification admits that thiurams and dithiocarbamates are known as conventional crosslinking agent for asphalt compositions. It would have been obvious to one of ordinary skill in the art to at least partially substitute a dithiocarbamate for the thiuram of the reference because they are known to function equivalently.

Applicant's response argues that the outstanding rejections are improper solely for the reason that the examiner has allegedly relied upon "official notice" to support the finding that it would have been obvious to substitute a crosslinking agent such as dithiocarbamates for the MBT or thiurams of the prior art references. This argument is not persuasive. The examiner does not rely on official notice to take in account a factual equivalence but rather, clearly and explicitly has relied upon the uncontroverted admission at paragraph [0031] of the original specification that the above mentioned compounds are known conventionally to operate as crosslinking agents. Specifically the passage reads, "a conventional sulfur-containing derivative (*e.g.* mercaptobenzothiazole (MBT), thiurams, dithiocarbamates, mercaptobenzimidazole (MBI) and/or elemental sulfur crosslinker for use in asphalts", a clear admission of their art recognized equivalence.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David M. Brunsman whose telephone number is 571-272-1365. The examiner can normally be reached on M, Th, F, Sa; 7:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on 571-272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/David M Brunsman/
Primary Examiner, Art Unit 1793

DMB